

Royal Ontario Museum
Life Sciences
Miscellaneous Publication

A Selected Bibliography on Mercury in the Environment, with Subject Listing

Susan Robinson and W.B. Scott



ROYAL ONTARIO MUSEUM LIBRARIES



3 1761 04305 6779

P.S.
Ro
690
R63
1974

ROM

Presented to

the Library

of the

Royal Ontario Museum

by

Dr. A.D. Tushingham



ROYAL ONTARIO MUSEUM

LIFE SCIENCES

MISCELLANEOUS PUBLICATION

SUSAN ROBINSON,
W. B. SCOTT

A Selected Bibliography
on Mercury
in the Environment,
with Subject Listing

Publication date: 30 September, 1974

ISBN 0-88854-166-X

Suggested citation: Life Sci. Misc. Publ., R. Ont. Mus.

ROYAL ONTARIO MUSEUM

PUBLICATIONS IN LIFE SCIENCES

The Royal Ontario Museum publishes three series in the Life Sciences:

LIFE SCIENCES CONTRIBUTIONS, a numbered series of original scientific publications, including monographic works.

LIFE SCIENCES OCCASIONAL PAPERS, a numbered series of original scientific publications, primarily short and usually of taxonomic significance.

LIFE SCIENCES MISCELLANEOUS PUBLICATIONS, an unnumbered series of publications of varied subject matter and format.

All manuscripts considered for publication are subject to the scrutiny and editorial policies of the Life Sciences Editorial Board, and to review by persons outside the Museum staff who are authorities in the particular field involved.

LIFE SCIENCES EDITORIAL BOARD

Chairman: WALTER M. TOVELL

Editor: J. C. BARLOW

Associate Editor: A. R. EMERY

Associate Editor: D. W. BARR

SUSAN ROBINSON was formerly a Technician in the Department of Mineralogy, Royal Ontario Museum.

W. B. SCOTT is Curator in the Department of Ichthyology and Herpetology, Royal Ontario Museum.

P.S.
To
160
P62
cap. 2



PRICE: \$1.25

©The Royal Ontario Museum, 1974

100 Queen's Park, Toronto, Canada

PRINTED AT THE UNIVERSITY OF TORONTO PRESS

Mercury Bibliography

Preface

This bibliography is a by-product of a study of mercury levels in fresh-water fishes of Ontario, currently being conducted at the Royal Ontario Museum. The study was initially financed by an Ontario Department of University Affairs grant in aid of research (D.U.A. Grant No. 2844-4-287) to Dr. J. A. Mandarino, Curator of Mineralogy, Dr. W. B. Scott, Curator of Ichthyology and Herpetology and Dr. C. McGowan, Assistant Curator of Vertebrate Palaeontology. It was obtained to investigate mercury and other elemental concentrations in various species of fishes in Ontario and to determine if there were any variations in concentrations with respect to time. Additional support was provided by a grant from the Canadian National Sportsmen's Show.

In the course of the study several different types of analyses were attempted: e.g. total mercury vs. organic mercury levels in a given sample; separation and identification of organic mercury compounds. Thus, a search was made into the literature on analytical methods for mercury. It was also of interest, during this study, to take account of mercury levels which had been measured in other organisms.

Similarly, we were interested in the toxic effects of mercury experimentally introduced to the organisms, as well as the effects of levels in the environment.

The references cited in several papers, as well as references listed in bibliographies of texts published on "mercury in the environment", were compiled as a source of information.

It is hoped this bibliography will serve as a guide to teachers, students, and beginning researchers, concerned with environmental problems in general, and who are interested in mercury from a specific point of view, such as the levels of mercury measured in humans. These people may not be familiar with the authors of the many papers which have been published recently on environmental mercury. They also probably do not have access to the expensive texts

which list these papers by author. This bibliography has categorized the various papers covering the time interval of the mid 1960's to May 1973. A few earlier papers from the 1930's through to the 1950's cover the historical background of the medical and pharmacological properties of mercury compounds.

Subject listing

The references listed by author in the main bibliography (pp. 8-53) can be classified by subject matter in the following way:

1. Analytical methods

Papers under this heading describe methods of determining mercury levels in biological and geological materials.

(a) Atomic absorption:

This is the method most commonly employed to measure mercury levels; includes both flame and flameless atomic absorption methods.

(b) Neutron activation analysis.

(c) Chromatography:

This method has been employed by Swedish and Japanese researchers to separate and identify organic mercury compounds in fishes.

(d) Other methods:

Colorimetry, photometry, emission spectroscopy, mass spectrograph.

2. Properties of mercury compounds

Papers under this heading are in two categories:

(a) General chemical and physical properties (not necessarily toxic properties).

(b) Toxic properties.

3. Biological and geochemical transformations

(a) Biological:

Transformations such as bacterial conversions of inorganic to organic mercury compounds, food chain concentrations of mercury compounds, and metabolism of inorganic and organic mercury compounds by various organisms (including the pharmacology of experimentally induced mercury concentrations in the organs of various animals).

(b) Geochemical:

Transformations such as equilibrium of mercury compounds established in water and conversions of mercury compounds in sediments.

4. Levels of mercury measured in the following

(a) Fishes

(b) Humans (including case histories of mercury

- poisoning)
- (c) Organisms other than fishes and humans
- (d) Water
- (e) Air
- (f) Sediments
- (g) Foods (including plants)

- 5. Symposia conferences...
and other publications related to mercury and the
environment.

References classified by subject

Numbers used are those of individual publications listed by author in the bibliography.

1. Analytical methods:

(a) Atomic absorption:

36, 54, 80, 91, 94, 136, 161, 170, 205, 241, 243, 244, 262, 264, 270, 273, 294, 296, 327, 342, 415

(b) Neutron activation analysis:

54, 81, 82, 83, 136, 168, 210, 273, 325, 334, 441

(c) Chromatography:

42, 48, 54, 125, 136, 199, 273, 322, 347, 348, 376, 443, 445

(d) Other methods: colorimetry, photometry, emission spectroscopy, mass spectrograph:

34, 39, 54, 136, 141, 199, 231, 251, 273, 323, 326, 339, 410, 427, 439

2. Properties of mercury compounds:

(a) General, chemical and physical properties:

1, 35, 49, 50, 89, 97, 119, 120, 125, 136, 211, 242, 305, 319, 425

(b) Toxic properties:

1, 4, 7, 8, 11, 12, 15, 16, 20, 21, 23, 28, 30, 31, 32, 35, 37, 46, 49, 52, 53, 54, 57, 59, 69, 70, 74, 76, 77, 78, 98, 99, 102, 103, 104, 109, 112, 114, 116, 118, 119, 120, 122, 124, 126, 127, 128, 132, 136, 137, 143, 144, 146, 150, 156, 157, 158, 159, 160, 162, 164, 165, 166, 171, 173, 175, 176, 179, 180, 181, 182, 185, 186, 187, 188, 189, 192, 194, 206, 207, 208, 209, 212, 215, 220, 221, 223, 224, 225, 226, 232, 235, 237, 238, 248, 249, 250, 252, 253, 254, 258, 259, 263, 265, 266, 267, 271, 272, 274, 275, 276, 277, 278, 279, 280, 289, 291, 297, 306, 307, 308, 310, 311, 312, 314, 315, 316, 317, 318, 324, 335, 338, 344, 345, 346, 349, 350, 357, 360, 365, 368, 369, 370, 371, 372, 373, 374, 377, 378, 379, 381, 390, 391, 392, 396, 397, 398, 399, 400, 401, 402, 404, 405, 411, 414, 417, 418, 419, 421, 423, 426, 432, 433, 434, 435, 447, 448, 455

3. Biological and geochemical transformations:

(a) Biological

2, 3, 6, 9, 10, 16, 37, 41, 43, 44, 49, 52, 54, 55, 56, 58, 60, 61, 62, 63, 64, 65, 66, 70, 71,

74, 76, 85, 87, 93, 95, 96, 100, 101, 102, 104,
 106, 107, 111, 115, 116, 117, 118, 120, 121, 124,
 126, 127, 132, 133, 134, 135, 136, 140, 142, 144,
 147, 148, 151, 152, 153, 159, 163, 166, 171, 172,
 177, 178, 181, 182, 183, 185, 186, 187, 188, 191,
 193, 194, 195, 196, 204, 215, 216, 219, 224, 226,
 227, 229, 230, 232, 233, 235, 239, 240, 247, 252,
 253, 254, 255, 256, 259, 260, 261, 263, 266, 267,
 269, 273, 274, 275, 277, 278, 279, 280, 281, 282,
 283, 284, 285, 286, 288, 290, 291, 293, 295, 298,
 300, 304, 309, 310, 311, 312, 313, 314, 315, 317,
 318, 320, 329, 330, 333, 335, 336, 337, 338, 340,
 341, 343, 344, 349, 351, 352, 353, 354, 355, 358,
 359, 361, 362, 363, 364, 365, 366, 367, 370, 371,
 375, 377, 379, 381, 383, 384, 387, 388, 393, 394,
 395, 396, 401, 408, 409, 411, 412, 413, 414, 418,
 419, 421, 424, 426, 427, 428, 432, 433, 436, 437,
 453, 456, 457, 459

(b) Geochemical transformations:

5, 29, 50, 67, 92, 115, 136, 202, 203, 226, 234,
 235, 273, 287, 300, 320, 430, 433

4. Levels of mercury measured on the following:

(a) Fishes:

9, 10, 19, 21, 28, 30, 31, 32, 41, 43, 47, 54, 72,
 73, 88, 114, 121, 131, 169, 173, 182, 197, 201,
 208, 209, 214, 218, 226, 233, 235, 236, 253, 254,
 257, 258, 265, 268, 302, 314, 315, 316, 321, 330,
 331, 403, 416, 417, 433, 444, 450, 452, 454, 460

(b) Humans:

2, 6, 8, 16, 23, 28, 52, 53, 54, 85, 103, 105, 114,
 124, 130, 136, 151, 156, 164, 165, 175, 176, 184,
 204, 206, 207, 212, 213, 214, 223, 224, 225, 226,
 235, 239, 249, 250, 255, 258, 265, 273, 279, 314,
 315, 316, 324, 335, 350, 368, 369, 371, 372, 373,
 374, 381, 382, 383, 389, 390, 391, 392, 399, 401,
 404, 405, 417, 432, 435, 440, 455

(c) Organisms other than fishes and humans:

17, 32, 43, 51, 52, 68, 75, 76, 77, 78, 103, 121,
 122, 123, 145, 162, 174, 197, 201, 214, 218, 226,
 253, 258, 265, 273, 314, 315, 356, 379, 380, 402,
 420, 421, 422, 429, 433, 451

(d) Water:

10, 13, 24, 26, 27, 29, 73, 79, 84, 86, 90, 108,
 119, 136, 149, 154, 155, 167, 169, 184, 186, 200,
 201, 203, 213, 217, 222, 226, 228, 245, 258, 273,
 292, 297, 299, 300, 303, 314, 315, 328, 400, 404,

406, 407, 417, 433, 438

(e) Atmosphere:

12, 13, 25, 26, 27, 40, 86, 108, 119, 129, 136,
149, 155, 198, 200, 202, 203, 226, 234, 258, 273,
297, 299, 301, 328, 433, 448, 449, 458

(f) Sediments:

5, 13, 18, 32, 33, 38, 40, 45, 67, 110, 169, 196,
214, 226, 234, 292, 320, 332, 385, 386, 431, 433

(g) Foods (including plants):

13, 14, 15, 22, 73, 113, 138, 139, 190, 197, 246,
273, 337, 338, 433, 442, 446

5. Special interest conferences

Symposia and related publications dealing with mercury
11, 54, 69, 98, 101, 136, 167, 179, 225, 226, 228,
235, 248, 258, 265, 273, 328, 371, 433

Selected bibliography

- 1 Abelson, P. H. 1970. Methyl mercury. *Science*, 169 (3942):237.
- 2 Aberg, B., L. Ekman, R. Falk, U. Gretiz, G. Persson, and J.-O. Snihs. 1969. Metabolism of methylmercury (^{203}Hg) compounds in man, excretion and distribution. *Arch. Environ. Health*, 19:478-484.
- 3 Adam, K. R. 1951. The effect of dithiols on the distribution of mercury in rabbits. *Br. J. Pharmacol.*, 6(3):483-491.
- 4 Ahlmark, A. 1948. Poisoning by methyl mercury compounds. *Br. J. Ind. Med.*, 5:117-119.
- 5 Aidinyan, N. Kh., N. A. Ozerova, and S. K. Gipp. 1963. The distribution of mercury in recent sediments. (Transl. by Department of Secretary of State Translation Bureau 1963). *Geol. Surv. Can.*, pp. 1-17.
- 6 Aikawa, J. K., and R. H. Fritz. 1956. The distribution of Hg^{203} labeled mercaptomerin in human tissues. *J. Clin. Invest.*, 35:775-778.
- 7 Akiyama, A. 1970. Acute toxicity of two organic compounds to the teleost, *Oryzias latipes*, in different stages of development. *Bull. Jap. Soc. Sci. Fish.*, 36(6):563-570.
- 8 Alexander, J. F., and R. Rosario. 1971. A case of mercury poisoning: acrodynia in a child of 8. *Can. Med. Assoc. J.*, 104(10):929-930.
- 9 Amend, D. F. 1970. Retention of mercury by salmon. *Prog. Fish-Cult.*, 32(4):193-194.
- 10 Annett, C. S., M. P. Fadow, F. M. D'Itri, and M. E. Stephenson. 1972. Mercury pollution and Lake Erie fishes. *Mich. Acad.*, 4(3):325-337.
- 11 Anon. 1966. Meeting of investigators for the international study of normal values for toxic substances in the human body. W.H.O. Occup. Health 6639, Geneva:6-7.

- 12 Anon. 1969. Maximum allowable concentrations of mercury compounds (MAC). Arch. Environ. Health, 19:891-905.
- 13 Anon. 1970. Mercury in the environment: a compilation of papers on abundance, distribution, and testing of mercury in rocks, soils, waters, plants and the atmosphere. U.S. Geol. Surv., Prof. Pap. 713, pp. 1-67.
- 14 Anon. 1971a. Determination of mercury in foods. B.F.M.I.R.A., 5(2):1-2.
- 15 Anon. 1971b. A column of mercury. Part I. Food Cosmet. Toxicol., 9(1):140-144.
- 16 Anon. 1971c. A column of mercury. Part II. Food Cosmet. Toxicol., 9(2):284-289.
- 17 Anon. 1971d. Mercury in whales. Mar. Pollut. Bull., 2(5):68.
- 18 Anon. 1972a. Mercury in sediments. In Annual Report 1971. Canadian Center for Inland Waters, Department of the Environment, Burlington, Ontario. p. 2.
- 19 Anon. 1972b. Don't be afraid of swordfish. Can. Fish Ocean Ser., 58(6):24.
- 20 Anon. 1972c. Mercury banned. Newsl. Am. Fish. Soc., 16(76):5.
- 21 Anon. 1972d. Mercury levels in shark two to six times FDA limit. Ecolert, 2(56):E2051-56X. [Abstracted from New York Times, 6 June:44.]
- 22 Anon. 1972e. Mercury found in Japanese soft drinks. Ecolert, 2(69):E-2569-69. [Abstracted from Japan Times, 13 Sept.:3.]
- 23 Anon. 1972f. NWT conducts tests for mercury poisoning. Ecolert, 2(71):E-2655-71. [Abstracted from Inuvik Drum, 24 Aug.:4.]
- 24 Anon. 1972g. Dow Canada sued by Detroit fish marketers. Ecolert, 2(74):E-2775-74. [Abstracted from Montreal Star, 5 Oct.:C9.]

- 25 Anon. 1972h. Mercury in paint. Fed. Ont. Nat. Newsl., 13(4):4.
- 26 Anon. 1972i. Mercury firms again. Min. J., 279(7143):36.
- 27 Anon. 1972j. Mercury: adverse publicity bites hard. Min. J., 279(7145):64.
- 28 Anon. 1973a. Mercury poisoning urged as verdict in guide's death. The Globe and Mail, Toronto, 27 Jan.:1.
- 29 Anon. 1973b. New process cuts down mercury level in effluent. Ecolert 3(89):E-3391-89. [Abstracted from Chem. Eng., 5 Feb.:27.]
- 30 Anon. 1973c. Sports Fishing Institute Directors resolution: FDA mercury standard in fish. Sports Fishing Institute Bull., 241(Jan.-Feb.):3.
- 31 Anon. 1973d. No mercury health crisis. Sports Fishing Institute Bull., 241(Jan.-Feb.):5.
- 32 Anon. 1973e. Sediment is blamed for mercury pollution. The Globe and Mail, Toronto, 9 Mar.:10.
- 33 Applequist, M. D., A. Katz, and K. K. Turekian. 1972. Distribution of mercury in the sediments of New Haven (Conn.) harbour. Environ. Sci. Technol., 6(13):1123-1124.
- 34 April, R. W., and D. N. Hume. 1970. Environmental mercury: rapid determination in water at nanogram levels. Science, 170(3960):849-850.
- 35 Arehart, J. L. 1971. Trace elements: no longer good vs. bad. Sci. News, 100(7):112-113.
- 36 Armstrong, F. A. J., and J. F. Uthe. 1971. Semi-automated determination of mercury in animal tissue. Atomic Absorption Newsl., 10(5):101-103.
- 37 Arrhenius, E. 1967. Effects of organic mercury compounds on the detoxification mechanism of liver cells *in vitro*. Oikos, Suppl., 9:32-35.

- 38 Aston, S. R., D. Bruty, R. Chester, and R. C. Padgham. 1973. Mercury in lake sediments: a possible indicator of technological growth. *Nature*, 241 (5390):450-451.
- 39 Azzaria, L. M. 1967. A method of determining traces of mercury in geological materials. *Geol. Surv. Canada, Pap.* 66-54:13-26.
- 40 Azzaria, L. M., ed. 1973. Mercury in soil and air as a guide to mineralization in four areas of Quebec. Mineral deposit services. [in French.] Quebec Minist. Nat. Resour., pp. 1-35.
- 41 Bache, C. A., W. H. Gutenmann, and D. J. Liske. 1971. Residues of total mercury and methylmercuric salts in lake trout as a function of age. *Science*, 172 (3986):951-952.
- 42 Bache, C. A., and D. J. Liske. 1971. Gas chromatographic determination of organic mercury compounds by emission spectrometry in a helium plasma application to the analysis of methylmercury salts in fish. *Anal. Chem.*, 43(7):950-952.
- 43 Backstrom, J. 1969. Distribution studies of mercury pesticides in quail and some fresh water fishes. *Acta Pharmacol. Toxicol.*, 27, Suppl. 3, pp. 1-103.
- 44 Bahr, G. F., and G. Moberger. 1954. Methyl-mercury chloride as a specific reagent for protein-bound sulfhydryl groups. *Electron Stains II, Exp. Cell Res.*, 6:506-518.
- 45 Bailey, E. H., P. D. Snavelly, and D. E. White. 1961. Chemical analyses of brines and crude oil, Cymric Field, Kern County, Calif. *U.S. Geol. Surv., Prof. Pap.* 424-D:306-309.
- 46 Baker, R. A., and M.-D. Luh. 1971. Mercury analyses and toxicity: a review. *Water Sewage Works*, 118(5): 1W/21, 23, 25, 27, 29.
- 47 Barber, R. T., A. Vijayakumar, and F. A. Cross. 1972. Mercury concentrations in recent and ninety-year-old benthopelagic fish. *Science*, 178(4061):636-639.

- 48 Barnes, E. C. 1946. The determination of mercury in air. J. Ind. Hyg. Toxic., 28:257-261.
- 49 Ben-Bassat, D., G. Shelef, N. Gruner, and H. I. Shuval. 1972. Growth of *Chlamydomonas* in a medium containing mercury. Nature, 240(5375):43-44.
- 50 Benes, P. 1969. On the state of mercury (II) traces in aqueous solution; colloidal states of mercury. J. Inorg. Chem., 31(7):1923-1928.
- 51 Berg, W., A. Johnels, B. Sjöstrand, and T. Westermarck. 1966. Mercury content in feathers of Swedish birds from the past 100 years. Oikos, 17:71-83.
- 52 Berglund, F., and M. Berlin. 1969a. Risk of methylmercury cumulation in man and mammals and the relation between body burden of methylmercury and toxic effects. In Miller, M. W., and G. G. Berg, eds. Chemical fallout. Current research on persistent pesticides. C. C. Thomas, Springfield, Illinois. pp. 258-273.
- 53 Berglund, F., and M. Berlin. 1969b. Human risk evaluation for various populations in Sweden due to methylmercury in fish. In Miller, M. W., and G. G. Berg, eds. Chemical fallout. Current research on persistent pesticides. C. C. Thomas, Springfield, Illinois. pp. 423-431.
- 54 Berglund, F., M. Berlin, G. Birke, R. Cederlof, U. von Euler, L. Friberg, B. Holmstedt, E. Jonsson, K. G. Luning, C. Ramel, S. Skerfving, A. Swensson, and S. Tejning. 1971. Methylmercury in fish. A toxicologic-epidemiologic evaluation of risks. Report from an expert group. Nordisk Hygienisk Tidskrift, Suppl. 4, Uno S. Andersons Tryckeri, Stockholm. 364 pp.
- 55 Bergstrand, A., L. Friberg, L. Mendel, and E. Odeblad. 1959. The localization of subcutaneously administered radioactive mercury in the rat kidney. J. Ultrastruct. Res., 3:234-240.

- 56 Berlin, M. 1963a. Advantages and disadvantages of whole-organ assay and whole-body section autoradiography as revealed in studies of the body distribution of mercury and cadmium. *In Proc. 11e. Symp. Int. Limites Tolerables, Paris.* p. 223.
- 57 Berlin, M. 1963b. On estimating threshold limits for mercury in biological material. *Acta Med. Scand. Suppl.*, 396:1-29.
- 58 Berlin, M. 1963c. Renal uptake, retention and excretion of mercury. II. A study on the rabbit during infusion of methyl- and phenylmercury compounds. *Arch. Environ. Health*, 6:626-633.
- 59 Berlin, M. 1966. Recent progress in mercury toxicology research and its consequences for current occupational mercury problems. *Proc. 15th Int. Congr. Occup. Health, Wein 1966*, 3:107-115.
- 60 Berlin, M., J. Fazackerly, and G. Nordberg. 1969. The uptake of mercury in the brains of mammals exposed to mercury vapour and to mercuric salts. *Arch. Environ. Health*, 18:719-729.
- 61 Berlin, M., and S. Gibson. 1963. Renal uptake retention and excretion of mercury. I. A study in the rabbit during infusion of mercuric chloride. *Arch. Environ. Health*, 6:617-625.
- 62 Berlin, M., L.-G. Jerksell, and H. von Ubisch. 1966. Uptake and retention of mercury in the mouse brain. *Arch. Environ. Health*, 12:33-42.
- 63 Berlin, M., and L. G. Johansson. 1964. Pharmacology mercury in mouse brain after inhalation of mercury vapour and after intravenous injection of mercury salt. *Nature*, 204(4953):85-86.
- 64 Berlin, M., and S. Ullberg. 1963a. Accumulation and retention of mercury in the mouse. I. An autoradiographic study after a single intravenous injection of mercuric chloride. *Arch. Environ. Health*, 6:589-601.

- 65 Berlin, M., and S. Ullberg. 1963b. Accumulation and retention of mercury in the mouse. II. An autoradiographic comparison of phenylmercuric acetate with inorganic mercury. Arch. Environ. Health, 6:602-609.
- 66 Berlin, M., and S. Ullberg. 1963c. Accumulation and retention of mercury in the mouse. III. An autoradiographic comparison of methylmercuric dicyandiamide with inorganic mercury. Arch. Environ. Health, 6:610-616.
- 67 Bertine, K. K., and E. D. Goldberg. 1971. Fossil fuel combustion and the major sedimentary cycle. Science, 173(3993):233-235.
- 68 Bertine, K. K., and E. D. Goldberg. 1972. Trace elements in clams, mussels, and shrimp. Limnol. Oceanogr., 17(6):877-884.
- 69 Bidstrup, P. L. 1964. Toxicity of mercury and its compounds. Elsevier Publishing Co., New York. 112 pp.
- 70 Biesinger, K. E., and G. M. Christensen. 1972. Effects of various metals on survival, growth, reproduction and metabolism of *Daphnia magna*. J. Fish. Res. Bd. Canada, 29(12):1691-1700.
- 71 Bitensky, M. W., K. L. Yielding, and G. M. Tomkins. 1965. The reversal by organic mercurials of "allosteric" changes in glutamate dehydrogenase. J. Biol. Chem., 240:668-673.
- 72 Bligh, E. G. 1970. Mercury in freshwater fish. Fish. Canada, 22(10):7-8.
- 73 Bligh, E. G. 1971. Environmental factors affecting the utilization of Great Lakes fish as human food. Limnos, 4(1):13-18.
- 74 Boney, A. D. 1971. Sub-lethal effects of mercury on marine algae. Mar. Pollut. Bull., 2(5):69-71.
- 75 Borg, K. 1967. Swedish studies of game that had been found dead as well as specimens that had been shot. Oikos, Suppl. 9:38.

- 76 Borg, K., K. Erne, E. Hanko, and H. Wanntorp. 1970. Experimental secondary methyl mercury poisoning in the goshawk. *Environ. Pollut.*, 1:91-104.
- 77 Borg, K., H. Wanntorp, K. Erne, and E. Hanko. 1965. Mercury poisoning in Swedish wildlife. *In* Moore, N. W., ed. *Pesticides in the environment and their effects on wildlife*. *J. Appl. Ecol.* 3, Suppl.: 171-172.
- 78 Borg, K., H. Wanntorp, K. Erne, and E. Hanko. 1969. Alkyl mercury poisoning in terrestrial Swedish wildlife. *Viltrevy (Stockh.)* 6:299-379.
- 79 Bouveng, H. O. 1967. Organo-mercurials in pulp and paper industry. *Oikos*, Suppl. 9:18-19.
- 80 Brandenberger, H., and H. Bader. 1967. The determination of nanogram levels of mercury in solution by a flameless atomic absorption technique. *Helv. Chim. Acta*, 50:1409-1415.
- 81 Brune, D. 1966. Low-temperature irradiation applied to neutron activation analysis of mercury in human whole blood. *Acta Chem. Scand.*, 20:1200-1202.
- 82 Brune, D. 1969. Aspects of low temperature radiation in neutron activation analysis. *Anal. Chem. Acta*, 44: 15-20.
- 83 Brune, D., and K. Jirlow. 1967. Determination of mercury in aqueous samples by means of neutron activation analysis with an account of flux disturbances. *Radiochim. Acta*, 8:161-164.
- 84 Burton, J. D., and T. M. Leatherland. 1971. Mercury as a coastal marine environment. *Nature*, 231(5303): 440-442.
- 85 Butt, E. M., and D. G. Simonsen. 1950. Mercury and lead storage in human tissues, with special reference to *Thrombocytopenic purpura*. *Am. J. Clin. Pathol.*, 20(2):716-723.
- 86 Bylinsky, G. 1971. Metallic menaces in the environment. *Fortune*, 83(1):110-113, 125-126, 130.

- 87 Campbell, D. E. S. 1960. Modification by bromcresol-green or probenecid of the excretion and diuretic effect of three mercurial diuretics: diurzine, chlormerodrin and mercumatilin. *Acta Pharmacol. Toxicol.*, 17:213-232.
- 88 Celeste, A. C., and C. G. Shane. 1970. Mercury in fish. *FDA Pap.*, 4(9):27-30.
- 89 Cember, H., P. Gallagher, and A. Faulkner. 1968. Distribution of mercury among blood fractions and serum proteins. *Am. Ind. Hyg. Assoc. J.*, 29:233-237.
- 90 Chaney, E. 1971. Catastrophe brewing in quiet waters. *Natl. Wildl.*, 9(5):4-7.
- 91 Chau, Y. K., and H. Saitoh. 1970. Determination of sub-microgram quantities of mercury in lake waters. *Environ. Sci. Technol.*, 4:839-841.
- 92 Ciavatta, L., and M. Grimaldi. 1968. Equilibrium constants of mercury (II) chloride complexes. *J. Inorg. Nucl. Chem.*, 30:197-205.
- 93 Clarkson, T. W. 1969. Isotope exchange method in studies on the biotransformation of organomercurial compounds in experimental animals. *In* Miller, M. W. and G. G. Berg, eds. *Chemical fallout. Current research on persistent pesticides.* C. C. Thomas, Springfield, Illinois. pp. 274-296.
- 94 Clarkson, T. W., and M. R. Greenwood. 1970. Selective determination of inorganic mercury in the presence of organomercurial compounds in biological material. *Anal. Biochem.*, 37:236-243.
- 95 Clarkson, T. W., and J. E. Kench. 1956. Urinary excretion of amino acids by men absorbing heavy metals. *Biochem. J.*, 62:361-372.
- 96 Clarkson, T. W., and L. Magos. 1966. Studies on the binding of mercury in tissue homogenates. *Biochem. J.*, 99:62-70.
- 97 Coates, G. E. 1960. *Organo-metallic compounds.* Methuen and Co., London. p. 73.

- 98 Commoner, B., ed. 1972. The closing circle; nature, man and technology. Alfred A. Knopf, New York. 326 pp.
- 99 Copeland, R. 1970. The mercury threat: questions to consider. *Limnos*, 3(2):11-13.
- 100 Cullen, M. C., and E. T. McGuinness. 1971. Radiochromatographic assay for thiol groups of soluble proteins using mercury--(203 labeled) as methylmercury. *Anal. Biochem.*, 42(2):455-469.
- 101 Cumings, J. N. 1959. Heavy metals and the brain. Blackwell Scientific Publ., Oxford. 161 pp.
- 102 Cuppage, F. E., and A. Tate. 1967. Repair of the nephron following injury with HgCl_2 . *Am. J. Pathol.*, 51:405-429.
- 103 Curley, A., V. A. Sedlack, E. F. Girling, R. E. Hawk, W. F. Barthel, P. E. Pierce, and W. H. Likosky. 1971. Organic mercury identified as the cause of poisoning in humans and hogs. *Science*, 172(3978): 65-67.
- 104 Dahhan, S. S., and H. Orfaly. 1964. Electrocardiographic changes in mercury poisoning. *Am. J. Cardiol.*, 14:178-183.
- 105 Dal Cortivo, L. A., S. B. Weinberg, P. Giaquinta, and M. B. Jacobs. 1964. Mercury levels in normal human tissue. *J. Forensic Sci.*, 9:501-510.
- 106 Daniel, J. W., and J. C. Gage. 1969. The metabolism of 2-methoxy (^{14}C)- ethyl mercuric chloride. *Biochem. J.*, 111:20.
- 107 Demis, D. J., and A. Rothstein. 1955. Relationship of the cell surface to metabolism. XII. Effect of mercury and copper on glucose uptake and respiration of rat diaphragm. *Am. J. Physiol.*, 180:566-574.
- 108 Dickson, E. M. 1971. Mercury contamination and the industrial revolution. *Bioscience*, 21(10):450.
- 109 Dunn, H. D. 1970. Mercury adds another somber aspect to Alabama's pollution problem. *Ala. Conserv.*, 40(4): 4-5.

- 110 Eades, J. F. 1966. Pesticide residues in the Irish environment. *Nature*, 210(5036):650-652.
- 111 Ellis, R. W., and S. C. Fang. 1967. Elimination, tissue accumulation, and cellular incorporation of mercury in rats receiving an oral dose of ^{203}Hg -labelled phenyl-mercuric acetate and mercuric acetate. *Toxicol. Appl. Pharmacol.*, 11:104-113.
- 112 Engleson, G., and T. Herner. 1952. Alkyl mercury poisoning. *Acta Paediatr. Scand.*, 41:289-294.
- 113 Eyl, T. B. 1971. Alkylmercury contamination of foods. *J. Am. Med. Assoc.*, 215(2):287-288.
- 114 Eyl, T. B., K. R. Wilcox, and M. S. Reizen. 1970. Mercury, fish and human health. *Mich. Med.*, 69: 873-880.
- 115 Fagerstrom, T., and A. Jernelov. 1971. Formation of methyl mercury from pure mercuric sulphide in aerobic organic sediment. *Water Res.*, 5(3):121-122.
- 116 Fahmy, F. Y. 1951. Cytogenetic analysis of the action of some fungicide mercurials. Ph.D. Thesis. Dep. of Genetics, University of Lund, Sweden. S-22362.
- 117 Falk, R., J.-O. Snihs, L. Ekman, U. Greitz, and B. Aberg. 1970. Whole-body measurements on the distribution of mercury -203 in humans after oral intake of methylradio-mercury nitrate. *Acta Radiol.*, 9:55-72.
- 118 Fimreite, N. 1970a. Effects of methyl mercury treated feed on the mortality and growth of leghorn cockerels. *Can. J. Anim. Sci.*, 50:387-389.
- 119 Fimreite, N. 1970b. Mercury uses in Canada and their possible hazards as sources of mercury contamination. *Environ. Pollut.*, (1):119-131.
- 120 Fimreite, N. 1971. Effects of dietary methylmercury on Ring-necked Pheasant (with special reference to reproduction). *Can. Wildl. Serv. Occas. Pap.* 9, pp. 1-39.

- 121 Fimreite, N., W. N. Holsworth, J. A. Keith, P. A. Pearce, and I. M. Gruchy. 1971. Mercury in fish and fish-eating birds near sites of industrial contamination in Canada. *Can. Field Nat.*, 85(3):211-220.
- 122 Fimreite, N., and L. Karstad. 1971. Effects of dietary methylmercury on Red-tailed Hawks. *J. Wildl. Manage.*, 35:293-300.
- 123 Fimreite, N., R. W. Fyfe, and J. A. Keith. 1970. Mercury contamination of Canadian prairie seed-eaters and their avian predators. *Can. Field Nat.*, 84(3):269-276.
- 124 Finkel, A. J. 1971. Mercury residue blood levels and tolerance limits in fish eaters. *J. Am. Med. Assoc.*, 216(7):1208.
- 125 Fishbein, L. 1970. Chromatographic and biological aspects of organomercurials. *Chromatogr. Rev.*, 13(2):83-162.
- 126 Fiskesjø, G. 1969. Some results from *Allium* tests with organic mercury halogenides. *Hereditas*, 62:314-322.
- 127 Fiskesjø, G. 1970. The effect of two organic mercury compounds on human leucocytes *in vitro*. *Hereditas*, 64:142-146.
- 128 Fitzhugh, O. G., A. A. Nelson, E. P. Laug, and F. M. Kunze. 1950. Chronic oral toxicities of mercuriphenyl and mercuric salts. *Ind. Hyg. Occup. Med.*, 2:433-442.
- 129 Foote, R. S. 1972. Mercury vapour concentrations inside buildings. *Science*, 177(4048):513-514.
- 130 Forbes, R. M., A. R. Cooper, and H. H. Mitchell. 1954. On the occurrence of beryllium, boron, cobalt, and mercury in human tissues. *J. Biol. Chem.*, 209: 857-865.
- 131 Forrester, C. R., K. S. Ketchen, and C. C. Wong. 1972. Mercury content of spiny dogfish (*Squalus acanthias*) in the Strait of Georgia, British Columbia. *J. Fish. Res. Bd. Canada*, 29(10):1487-1490.

- 132 Fowler, B. A. 1972. Ultrastructural evidence for neuropathy induced by long-term exposure to small amounts of methyl mercury. *Science*, 175(4023):780-781.
- 133 Friberg, L. 1959. Studies on the metabolism of mercuric chloride and methyl mercury dicyandiamide. *A.M.A. Arch. Ind. Health*, 20:42-49.
- 134 Friberg, L., E. Odeblad, and S. Forssman. 1957. Distribution of two mercury compounds in rabbits after a single subcutaneous injection. *A.M.A. Arch. Ind. Health*, 16:163-168.
- 135 Friberg, L., E. Skog, and J. E. Wahlberg. 1961. Resorption of mercuric chloride and methyl mercury dicyandiamide in guinea pigs through normal skin and through skin pre-treated with acetone, alkylaryl-sulphonate and soap. *Acta Derm.-Venereol.*, 41:40-52.
- 136 Friberg, L., and J. Vostal, eds. 1972. Mercury in the environment: an epidemiological and toxicological appraisal. CRC Press, Cleveland, Ohio. 215 pp.
- 137 Frykholm, K. O. 1957. Mercury toxicity. *Acta Odontol. Scand.* 15, Suppl. 22, pp. 1-108.
- 138 Fujita, T. 1970. Mercury content in rice. *Chem. Abstr.*, 73(86684):257. [Abstracted from Shiga Kenritsu Eisei Kenkyushoho. 1966 (published 1968) 7:14-15.]
- 139 Fukunaga, K., Y. Tsukano, and J. Kanazawa. 1972. Residue analysis of organomercury fungicides sprayed on rice plants. *In* Tsukano, Y., J. Kanazawa, eds. *Environmental toxicology of pesticides*. Academic Press, New York. pp. 177-191.
- 140 Furukawa, K., T. Suzuki, and K. Tonomura. 1969. Decomposition of organic mercurial compounds by mercury resistant bacteria. *Rep. Agr. Biol. Chem.*, 33: 128-130.
- 141 Gage, J. C. 1961. The trace determination of phenyl- and methylmercury salts in biological material. *Analyst*, 86:457-459.

- 142 Gage, J. C. 1964. Distribution and excretion of methyl and phenyl mercury salts. Br. J. Ind. Med., 21: 197-202.
- 143 Gage, J. C., and A. A. B. Swan. 1961. The toxicity of alkyl and aryl mercury salts. Biochem. Pharmacol., 8:77.
- 144 Ganther, H. E., C. Goudie, M. L. Sunde, M. J. Kopecky, P. Wagner, S.-H. Oh, and W. G. Hoekstra. 1972. Selenium: relation to decreased toxicity of methyl-mercury added to diets containing tuna. Science, 175(4026):1122-1124.
- 145 Gaskin, D. E., K. Ishida, and R. Frank. 1972. Mercury in harbour porpoises (*Phocoena phocoena*) from the Bay of Fundy region. J. Fish. Res. Bd. Canada, 29(11):1644-1646.
- 146 Gibbs, O. S., H. Pond, and G. A. Hansmann. 1941. Toxicological studies on ammoniated mercury. J. Pharmacol., 72:16-17.
- 147 Gillespie, D. C. 1972. Mobilization of mercury from sediments into guppies (*Poecilia reticulata*). J. Fish. Res. Bd. Canada, 29(7):1035-1041.
- 148 Gillespie, D. C., and D. P. Scott. 1971. Mobilization of mercuric sulphide from sediments into fish under aerobic conditions. J. Fish. Res. Bd. Canada, 28 (11):1807-1808.
- 149 Gilluly, R. H. 1970. Trace elements in air and water. Sci. News, 97(2):538-539.
- 150 Gilluly, R. H. 1971. Mercury pollution: new studies show a lot of work must still be done. Sci. News, 100(9):156.
- 151 Glomski, C. A., H. Brody, and S. K. K. Pillay. 1971. Distribution and concentration of mercury in autopsy specimens of human brain. Nature, 232(5307):200-201.
- 152 Glooschenko, W. A. 1969. Accumulation of ^{203}Hg by the marine diatom *Chaetoceros costatum*. J. Phycol., 5:224-226.

- 153 Goldberg, A. A., M. Shapero, and E. Wilder. 1950. The penetration of phenylmercuric dinaphtylmethane disulphonate into skin and muscle tissue. *J. Pharm. Pharmacol.*, 2:89-97.
- 154 Goldberg, E. D. 1963. The oceans as a chemical system. *In* Mill, M. N., ed. *The sea*. Vol. 2. Interscience, New York. pp. 3-25.
- 155 Goldwater, L. J. 1971. Mercury in the environment. *Sci. Am.*, 224(5):15-21.
- 156 Goldwater, L. J. 1972. Human toxicology of mercury. *In* Matsumara, F., G. M. Boush, and T. Tisato, eds. *Environmental toxicology of pesticides*. Academic Press, New York. pp. 165-175.
- 157 Greco, A. R. 1930. Elective effects of some mercurial compounds on nervous system estimation of mercury in blood and spinal fluid of animals treated with diethyl mercury and with common mercurial compounds. *Riv. Neurol.*, 3:515-539.
- 158 Grolleau, G., and J. Giban. 1966. Toxicity of seed dressings to game birds and theoretical risks of poisoning. *In* Moore, N. W., ed. *Pesticides in the environment and their effect on wildlife*. *J. Appl. Ecol.* 3, Suppl.:199-212.
- 159 Gruenwedel, D. W., and N. Davidson. 1966. Complexing and denaturation of DNA by methylmercuric hydroxide. I. Spectrophotometric studies. *J. Mol. Biol.*, 21: 129-144.
- 160 Haber, M. H., and R. B. Jennings. 1964. Sex differences in renal toxicity of mercury in the rat. *Nature*, 201(4925):1235.
- 161 Hadeishi, T., and R. D. McLaughlin. 1971. Hyperfine zeeman effect atomic absorption spectrometer for mercury. *Science*, 174(4007):404-407.
- 162 Hanko, E., K. Erne, H. Wanntorp, and K. Borg. 1970. Poisoning in ferrets by tissues of alkyl mercury-fed chickens. *Acta Vet. Scand.*, 11:268-282.

- 163 Hannerz, L. 1968. Experimental investigations on the accumulation of mercury in water organisms. Rep. Inst. Freshwater Res. Drottningholm, 48:120-176.
- 164 Harada, Y. 1968a. Clinical investigations on Minamata disease. B. Infantile Minamata disease. *In* Kutsana, M., ed. Minamata disease. Study group of Minamata disease, Kumamoto University, Japan. p. 73-92.
- 165 Harada, Y. 1968b. Clinical investigations on Minamata disease. C. Congenital (or fetal) Minamata disease. *In* Kutsana, M., ed. Minamata disease. Study group of Minamata disease, Kumamoto University, Japan. p. 93-117.
- 166 Harriss, R. C., D. B. White, and R. B. MacFarlane. 1970. Mercury compounds reduce photosynthesis by plankton. *Science*, 170(3959):736-737.
- 167 Harting, R., and B. D. Dinman, eds. 1972. Environmental mercury contamination. Ann Arbor, Michigan. (Based on international conferences on environmental mercury contamination in Ann Arbor, Michigan, 30 Sept.-2 Oct. 1970) 349 pp.
- 168 Hasanen, E. 1970. Determination of mercury in biological material by neutron activation analysis. *Suom. Kemistil.*, 43:251-254.
- 169 Hasselrot, T. B. 1968. Report on current field investigations concerning the mercury content in fish, bottom sediment, and water. Rep. Inst. Freshwater Res. Drottningholm, 48:102-111.
- 170 Hatch, W. R., and W. L. Ott. 1968. Determination of submicrogram quantities of mercury by atomic absorption spectroscopy. *Anal. Chem.*, 40(14): 2085-2086.
- 171 Hay, W. J., A. G. Rickards, W. H. McMenemey, and J. N. Cumings. 1963. Organic mercurial encephalopathy. *J. Neurol. Neurosurg. Psychiatr.*, 26:199-202.
- 172 Hayes, A. D., and A. Rothstein. 1962. The metabolism of inhaled mercury vapour in the rat, studied by isotope techniques. *J. Pharmacol. Exp. Ther.*, 138:1-10.

- 173 Hearnden, E. H. 1970. Mercury pollution: fisheries department acts quickly to safeguard public health. *Fish. Canada*, 22(10):3-6.
- 174 Henriksson, K., E. Karppanen, and M. Helminen. 1966. High residue of mercury in Finnish white-tailed eagles. *Ornis Fenn.*, 43:38-45.
- 175 Hill, W. H. 1943. A report on two deaths from exposure to the fumes of a diethyl mercury. *Can. J. Public Health*, 34:158-160.
- 176 Hook, O., K. D. Lundgren, and A. Swensson. 1954. On alkyl mercury poisoning: with a description of two cases. *Acta Med. Scand.*, 150:131-137.
- 177 Howe, M., J. McGee, and F. W. Lengemann. 1972. Transfer of inorganic mercury to milk of goats. *Nature*, 237 (5357):516-518.
- 178 Howell, J. 1969. Mercury residues in chicken eggs and tissues from a flock exposed to methylmercury di-cyandiamide. *Can. Vet. J.*, 10(8):212-213.
- 179 Hunter, D. 1969. The diseases of occupations. 5th ed. English Universities Press, London. 1259 pp.
- 180 Hunter, D., R. R. Bomford, and D. S. Russell, 1940. Poisoning by methyl mercury compounds. *Q. J. Med.*, 33:193-213.
- 181 Hunter, D., and D. S. Russell. 1954. Focal cerebral and cerebellar atrophy in a human subject due to organic mercury compounds. *J. Neurol. Neurosurg. Psychiatr.*, 17:235-241.
- 182 Idyll, C. P. 1971. Mercury and fish. *Sea Frontiers*, 17(4):230-240.
- 183 Imura, N., E. Sukegawa, S.-K. Pan, K. Nagao, J.-Y. Kim, T. Kwan, and T. Ukita. 1971. Chemical methylation of inorganic mercury with methylcobalamin, a vitamin B₁₂ analog. *Science*, 172(3989):1248-1249.
- 184 Irukayama, K. 1967. The pollution of Minamata Bay and Minamata disease. *Adv. Water Pollut. Res.*, 3:153-180.

- 185 Irukayama, K. 1968. Animal experiments with substances obtained by various treatments of the poisonous fish and shellfish. *In* Kutsuna, M., ed. Minamata disease. Study group of Minamata disease, Kumamoto University, Japan. pp. 253-256.
- 186 Irukayama, K., M. Fujiki, S. Tajima, S. Omori, H. Nakamura, and S. Kuwahara. 1969. Mercury pollution in Minamata district before and after the suspension of the production of acetaldehyde in Minamata factory. *Kumamoto Med. J.*, 43:946-957.
- 187 Itsuno, Y. 1968. Toxicologic studies on organic mercury compounds. Poisoning of rats with organic mercury compounds. *In* Kutsuna, M., ed. Minamata disease. Study group of Minamata disease, Kumamoto University, Japan. pp. 267-290.
- 188 Jackim, E., J. M. Hamlin, and S. Sonis. 1970. Effects of metal poisoning on five liver enzymes in the killifish (*Fundulus heteroclitus*). *J. Fish. Res. Bd. Canada*, 27(2):383-390.
- 189 Jalili, M. A., and A. H. Abbasi. 1961. Poisoning by ethyl mercury toluene sulphonanilide. *Br. J. Ind. Med.*, 18:303-308.
- 190 Jamalainen, E. A. 1968. The question of seed treatment of cereals in Scandinavia. *Ann. Agric. Fenn.* 7, Suppl. 1:5-9.
- 191 Jarvenpaa, T., M. Tillander, and J. K. Miettinen. 1970. Methylmercury: half-time of elimination in flounder, pike and eel. *Suom. Kemistil.*, 43:439-442.
- 192 Jenkins, D. W. 1972. The toxic metals in your future--and your past. *Smithsonian*, 3(1):62-69.
- 193 Jensen, S., and A. Jernelov. 1969. Biological methylation of mercury in aquatic organism. *Nature*, 223 (5207):753-754.
- 194 Jernelov, A. 1969. Are there any differences between "biologically" and "chemically" synthesized methyl mercury? *Vatten*, 29:304-309.

- 195 Jernelov, A. 1970a. Aquatic ecosystem for the laboratory. *Vatten*, 26:262-272.
- 196 Jernelov, A. 1970b. Release of methylmercury from sediments with layers containing mercury at different depths. *Limnol. Oceanogr.*, 15(6):958-960.
- 197 Jervis, R. E., D. Debrun, W. LePage, and T. Tiefenbach. 1970. Mercury residues in Canadian foods, fish, and wildlife. Department of Chemical Engineering and Applied Chemistry, University of Toronto. Summary of Progress: National Health Grant Project 605-7-510. Trace mercury in environmental materials for the period September 1969-May 1970. 39 pp.
- 198 Joensuu, O. I. 1971. Fossil fuels as a source of mercury pollution. *Science*, 172(3987):1027-1028.
- 199 Johansson, B., R. Ryhage, and G. Westoo. 1970. Identification and determination of methylmercury compounds in fish using combination gas chromatograph-mass spectrometer. *Acta Chem. Scand.*, 24:2349-2354.
- 200 Johnels, A. G., and T. Westermark. 1969. Mercury contamination of the environment in Sweden. In Miller, M. W., and G. G. Berg., eds. *Chemical fallout. Current research on persistent pesticides.* C. C. Thomas, Springfield, Illinois. pp. 221-239.
- 201 Johnels, A. G., T. Westermark, W. Berg, P. I. Persson, and B. Sjostrand. 1967. Pike (*Esox lucius* L.) and some other aquatic organisms in Sweden as indicators of mercury contamination in the environment. *Oikos*, 18:323-333.
- 202 Jonasson, I. R. 1973. Migration of trace metals in snow. *Nature*, 241(5390):447-448.
- 203 Jonasson, I. R., and R. W. Boyle. 1972. Geochemistry of mercury and origins of natural contamination in the environment. *Can. Min. Metallurgical*, 65(717):32-39.

- 204 Joselow, M. M., L. J. Goldwater and S. B. Weinberg.
1967. Absorption and excretion of mercury in man.
XI. Mercury content of "normal" human tissues.
Arch. Environ. Health, 15:64-66.
- 205 Kalb, G. W. 1970. The determination of mercury in water
and sediment by flameless atomic absorption. At.
Abs. Newsl., 9(4):84-87.
- 206 Kantarjian, A. D. 1961. A syndrome clinically resembling
amyotrophic lateral sclerosis following chronic
mercurialism. Neurology, 11:639-644.
- 207 Katsunuma, H., T. Suzuki, S. Nishi, and T. Kashima.
1963. Four cases of occupational organic mercury
poisoning. Rep. Inst. Sci. Labour, 61:33-40.
- 208 Keleher, J. J. 1970a. The contamination of Canadian
fish by mercury. Fishing (Winnipeg), 1970(4):14-20.
- 209 Keleher, J. J. 1970b. Mercury contamination in Canadian
fish. Wildlife Crusader, 16(4):8-9.
- 210 Kellershohn, C., D. Comar, and C. Le Poec. 1965.
Determination of the mercury content of human blood
by activation analysis. J. Lab. Clin. Med., 66:168-
175.
- 211 King, C. V. 1957. Mercury: its scientific history and
its role in physical chemistry and electrochemistry.
Ann. N.Y. Acad. Sci., 65:360-368.
- 212 Kitagawa, T. 1968. Clinical investigations on Minamata
disease. E. Rehabilitation in Minamata disease.
In Kutsuna, M., ed. Minamata disease. Study group
of Minamata disease, Kumamoto University, Japan.
pp. 127-140.
- 213 Kitamura, S. 1966. Discussion contribution: K. Iruk-
ayama, 1966. Pollution of Minamata Bay and Minamata
disease. Adv. Water Pollut. Res., 3:174-180.
- 214 Kitamura, S. 1968. Determination on mercury content in
bodies of inhabitants, cats, fishes and shells in
Minamata district and the mud of Minamata Bay. *In*
Kutsuna, M., ed. Minamata disease. Kumamoto Uni-
versity, Japan. pp. 257-266.

- 215 Kiwimae, A., A. Swensson, and U. Ulfvarson. 1970. Long term experiments on the effect of feeding white leghorn hens wheat treated with different mercury compounds. *Studia Laboris et Salutis*, 7:1-86.
- 216 Kiwimae, A., A. Swensson, U. Ulfvarson, and G. Westoo. 1969. Methylmercury compounds in eggs from hens after oral administration of mercury compounds. *J. Agr. Food Chem.*, 17(5):1014-1016.
- 217 Klein, D. H., and E. D. Goldberg. 1970. Mercury in the marine environment. *Environ. Sci. Technol.*, 4: 765-768.
- 218 Kleinert, S. J., and P. E. Degurse. 1972. Mercury levels in Wisconsin fish and wildlife. *Wis. Dep. Nat. Resour. Tech. Bull.* 52, pp. 1-23.
- 219 Knauer, G. A., and J. H. Martin. 1972. Mercury in a marine pelagic food chain. *Limnol. Oceanogr.*, 17(6):868-876.
- 220 Koeman, J. H., J. A. J. Vink, and J. J. M. Goeij. 1969. Causes of mortality in birds of prey and owls in the Netherlands in the winter of 1968-1969. *Ardea*, 57:67-76.
- 221 Konrad, J. G. 1970. Mercury: new found threat. *Wis. Conserv. Bull.*, 35(5):3-5.
- 222 Krauskopf, K. B. 1956. Factors controlling the concentrations of thirteen rare metals in seawater. *Geochim. Cosmochim. Acta*, 9:1-32B.
- 223 Krauskopf, K. B. 1960. Minamata disease. *World Neurol.*, 1:320-325.
- 224 Kurland, L. T., S. N. Faro, and H. S. Siedler. 1960. The outbreak of a neurological disorder in Minamata, Japan, and its relationship to the ingestion of seafood contaminated by mercuric compounds. *World Neurol.*, 1:370-395.
- 225 Kutsuna, M., ed. 1968. Minamata disease. Study group of Minamata disease, Kumamoto University, Japan. 338 pp. [In Japanese.]

- 226 Lambou, V. W. 1972. Report on the problem of mercury emission into the environment of the U.S. U.S. Environmental Protection Agency. 81 pp.
- 227 Landner, L. 1971. Biochemical model for the biological methylation of mercury suggested from methylation studies *in vivo* with *Neurospora crassa*. Nature, 230(5294):452-454.
- 228 Larsson, J. E. 1970. Environmental mercury research in Sweden. Swedish Environment Protection Board, Stockholm. 44 pp.
- 229 Laug, E. P., E. A. Vos, E. J. Umberger, and F. M. Kunze. 1947. A method for the determination of cutaneous penetration of mercury. J. Pharmacol. Exp. Ther., 89:42-51.
- 230 Laug, E. P., E. A. Vos, F. M. Kunze, and E. J. Umberger. 1947. A study of certain factors governing the penetration of mercury through the skin of the rat and the rabbit. J. Pharmacol. Exp. Ther., 89: 52-63.
- 231 Lidums, V., and U. Ulfvarson. 1968. Mercury analysis in biological material by direct combustion in oxygen and photometric determination of the mercury vapour. Acta Chem. Scand., 22:2150-2156.
- 232 Lindahl, P. E., and C. E. B. Hall. 1970. Effects of short term exposure of *Leuciscus rutilus* L. (Pisces) to phenylmercuric hydroxide. Oikos, 21(2):267-275.
- 233 Lockhart, W. L., J. F. Uthe, A. R. Kenney, and P. M. Mehrle. 1972. Methylmercury in northern pike (*Esox lucius*) distribution, elimination and some biochemical characteristics of contaminated fish. J. Fish. Res. Bd. Canada, 29(11):1519-1523.
- 234 Loensuu, O. I. 1971. Fossil fuels as a source of mercury pollution. Science, 172(3987):1027-1028.
- 235 Lofroth, G. 1970. Methylmercury. A review of health hazards and side effects associated with the emission of mercury compounds into natural systems. 2nd ed. Ecol. Res. Comm. Bull. 4, Swedish Natural Science Research Council, Stockholm. 59 pp.

- 236 Lucas, H. F., Jr., D. N. Edgington, and P. J. Colby. 1970. Concentrations of trace elements in Great Lakes fishes. J. Fish. Res. Bd. Canada, 27(4): 677-684.
- 237 Lundgren, K.-D., and A. Swensson. 1949. Occupational poisoning by alkyl mercury compounds. J. Ind. Hyg. 31:190-200.
- 238 Lundgren, K.-D., and A. Swensson. 1960. A survey of results of investigations on some organic mercury compounds used as fungicides. Am. Ind. Hyg. Assoc. J., 21:308-311.
- 239 Lundgren, K.-D., A. Swensson, and U. Ulfvarson. 1967. Studies in humans on the distribution of mercury in the blood and the excretion in urine after exposure to different mercury compounds. Scand. J. Clin. Lab. Invest., 20:164-166.
- 240 Magos, L. 1967. Mercury-blood interactions and mercury uptake by brain after vapour exposure. Environ. Res., 1:323-337.
- 241 Magos, L., and A. A. Cernik. 1969. A rapid method for estimating mercury in undigested samples. Br. J. Ind. Med., 26:144-149.
- 242 Makarova, L. G., and A. N. Nesmeyanov. 1967. The organic compounds of mercury. In Nesmeyanov, A. N., and K. A. Kocheshkov, eds. Methods of elemento-organic chemistry. Vol. 4. North Holland Publishing Co., Amsterdam. p. 337.
- 243 Manning, D. C. 1970a. Non-flame method for mercury determination by atomic absorption. At. Abs. Newsl., 9(5):97-99.
- 244 Manning, D. C. 1970b. Compensation for broad-band absorption interference in the flameless atomic absorption determination of mercury. At. Abs. Newsl., 9(5):109-110.
- 245 Manuel, B. 1971. Mercury and ground water. [Editorial] Ground Water Age, 5(7):64.

- 246 Martin, J. T. 1963. Mercury residues in plants. *Analyst*, 88:413.
- 247 Massey, T. H., and S. C. Fang. 1968. A comparative study of the subcellular binding of phenylmercuric acetate and mercuric acetate in the rat liver and kidney slices. *Toxicol. Appl. Pharmacol.*, 12:7-14.
- 248 Matsumara, F., G. M. Boush, and T. Misato, eds. 1972. *Environmental toxicology of pesticides*. Academic Press, New York. 637 pp.
- 249 Matsumoto, H., G. Koya, and T. Takeuchi. 1965. Fetal Minamata disease: a neuropathological study of two cases of intrauterine intoxication by methyl mercury compound. *J. Neuropathol. Exp. Neurol.*, 24:563-574.
- 250 McAlpine, D., and S. Araki. 1958. Minamata disease: An unusual neurological disorder caused by contaminated fish. *Lancet*, 2:629-631.
- 251 McNerny, J. J., P. R. Buseck, and R. C. Hanson. 1972. Mercury determined by means of thin gold films. *Science*, 178(4061):611-612.
- 252 Miettinen, J. K. 1969. Methylmercury as a food chain problem in Scandinavia. *Chem. and Tox. Aspects of Environmental Quality. Int. Symp., Munich.* p. 96.
- 253 Miettinen, J. K., M. Heyraud, and S. Keckes. 1970. Mercury as hydrospheric pollutant. II. Biological half-time of methyl mercury in four Mediterranean species: a fish, a crab and two molluscs. F.A.O. F.I.R.: MP/70/E-90, Rome. 5 Nov. 1970.
- 254 Miettinen, V., Y. Ohmomo, M. Valtonen, E. Blankenstein, K. Rissanen, M. Tillander, and J. K. Miettinen. 1969. Preliminary notes on the distribution and effects of two chemical forms of methyl mercury on pike. *Fifth Radioactivity in Scandinavia Symposium, Department of Radiochemistry, University of Helsinki.* [Mimeographed.]

- 255 Miettinen, J. K., T. Rahola, T. Hattula, K. Rissanen, and M. Tillander. 1969. Retention and excretion of ^{203}Hg -labelled methylmercury in man after oral administration of $\text{CH}_3^{203}\text{Hg}$ biologically incorporated into fish muscle protein--preliminary results. Fifth Radioactivity in Scandinavia Symposium, Department of Radiochemistry, University of Helsinki. [Mimeographed.]
- 256 Miettinen, J. K., M. Tillander, K. Rissanen, V. Miettinen, and Y. Ohmomo. 1969. Distribution and excretion rate of phenyl- and methylmercury nitrate in fish, mussels, molluscs and crayfish. Lecture held at the 9th Japan Conference on Radioisotopes, Tokyo. 13-15 May 1969. Department of Radiochemistry, University of Helsinki. [Mimeographed.]
- 257 Miller, G. E., P. M. Grant, R. Kishore, F. J. Steinkruger, R. S. Rowland, and V. P. Guinn. 1972. Mercury concentrations in museum specimens of tuna and swordfish. *Science*, 175(4026):1121-1122.
- 258 Miller, M. W., and G. G. Berg, eds. 1969. Chemical fallout: current research on persistent pesticides. C. C. Thomas, Springfield, Illinois. 531 pp.
- 259 Miller, V. L., G. E. Bearse, T. S. Russell, and E. Csonka. 1969. Thiol in liver and kidneys of chickens: effects of injection of three mercury compounds on starvation. *Poult. Sci.*, 48:1736-1743.
- 260 Miller, V. L., P. A. Klavano, and E. Csonka. 1960. Absorption, distribution and excretion of phenylmercuric acetate. *Toxicol. Appl. Pharmacol.*, 2: 344-352.
- 261 Miller, V. L., P. A. Klavano, A. C. Jerstad, and E. Csonka. 1961. Absorption, distribution and excretion of ethylmercuric chloride. *Toxicol. Appl. Pharmacol.*, 3:459-468.
- 262 Mittelhauser, H. M. 1970. Mercury analysis by flameless atomic absorption. *At. Abs. Newsl.*, 9(6):134.

- 263 Miyakawa, T., and M. Deshimaru. 1969. Electron microscopial study of experimentally induced poisoning due to organic mercury compound. Mechanism of development of the morbid change. *Acta Neuropathol.*, 14:126-136.
- 264 Moffitt, A. E., Jr., and R. E. Kupel. 1970. A rapid method employing impregnated charcoal and atomic absorption spectrophotometry for the determination of mercury in atmospheric, biological, and aquatic samples. *At. Abs. Newsl.*, 9(6):113-118.
- 265 Montague, K., and P. Montague. 1971. *Mercury*. Sierra Club. Guinn Co., New York, N.Y. 158 pp.
- 266 Morikawa, N. 1961a. Pathological studies on organic mercury poisoning. I. Experimental organic mercury poisoning in cats and its relation to the causative agent of Minamata disease. *Kumamoto Med. J.*, 14: 71-86.
- 267 Morikawa, N. 1961b. Pathological studies on organic mercury poisoning. II. Experimental production of congenital cerebellar atrophy by bis-ethyl mercuric sulphide in cats. *Kumamoto Med. J.*, 14:87-93.
- 268 Moyle, J. B. 1972. Mercury levels in Minnesota fish: 1970-1971. *Minn. Dep. Nat. Resour., Div. Game Fish, Spec. Publ. 97*, pp. 1-10.
- 269 Mudge, G. H., and I. M. Weiner. 1958. The mechanism of action of mercurial and xanthine diuretics. *Ann. N.Y. Acad. Sci.*, 71:344-354.
- 270 Munns, R. K., and D. C. Holland. 1971. Determination of mercury in fish by flameless atomic absorption: a collaborative study. *J. Assoc. Off. Agric. Chem.*, 54(1):202.
- 271 Murakami, U. 1969. Embryotoxic effects of some organic mercury compounds. *J. Jap. Med. Assoc.*, 61:1059-1071.

- 272 Murakami, U., Y. Kameyama, and T. Kato. 1956. Effects of a vaginally applied contraceptive with phenylmercuric acetate upon developing embryos and their mother animals. *In* Ann. Rep. Res. Inst. Environ. Med. Nagoya Univ. pp. 88-99.
- 273 Nelson, N., T. C. Byerly, A. C. Kolbye, L. T. Kurland, R. E. Shapiro, S. L. Shibko, W. H. Stickel, J. E. Thompson, L. A. Van den Berg, and A. Weissler. 1971. Hazards of mercury. *Environ. Res.*, 4:1-69.
- 274 Newberne, P. M., O. Glaser, L. Friedman, and B. R. Stillings. 1972. Chronic exposure of rats to methylmercury in fish protein. *Nature*, 237(5349):40-41.
- 275 Nishida, M., and K. L. Yielding. 1970. Alterations in catalytic and regulatory properties of glutamate dehydrogenase resulting from reaction with one molecule of C¹⁴ labeled methylmercuriodide. *Fed. Proc.*, 29:912.
- 276 Nixon, G. S., and H. Smith. 1965. Hazards of mercury poisoning in the dental surgery. *J. Oral Ther. Pharmacol.*, 1:512-514.
- 277 Nolen, G. A., R. L. Bohne, and E. V. Buehler. 1972. Effects of trisodium nitrilotriacetate, trisodium citrate and a trisodium nitrilotriacetate-ferrous chloride mixture on cadmium and methyl mercury toxicity and teratogenesis in rats. *Toxicol. Appl. Pharmacol.*, 23(2):238-250.
- 278 Nolen, G. A., E. V. Buehler, R. G. Geil, and E. I. Goldenthal. 1972. Effects of trisodium nitrilotriacetate on cadmium and methyl mercury toxicity and teratogenicity in rats. *Toxicol. Appl. Pharmacol.*, 23(2):222-237.
- 279 Nomura, S. 1968. Epidemiology of Minamata disease. *In* Kutsuna, M., ed. Minamata disease. Study group of Minamata disease, Kumamoto University, Japan. pp. 5-36.
- 280 Nonaka, I. 1969. An electron microscopical study on the experimental congenital Minamata disease in rat. *Kumamoto Med. J.*, 22:27-40.

- 281 Nordberg, G. F., and F. Serenius. 1969. Distribution of inorganic mercury in the guinea pig brain. *Acta Pharmacol.*, 27:269-283.
- 282 Norseth, T., 1967. The intracellular distribution of mercury in rat liver after methoxyethylmercury intoxication. *Biochem. Pharmacol.*, 16:1645-1654.
- 283 Norseth, T. 1968. Intracellular distribution of mercury in rat liver after a single injection of mercuric chloride. *Biochem. Pharmacol.*, 17:581-593.
- 284 Norseth, T. 1969. Studies on the biotransformation of methylmercury salts in the rat. Thesis. Department of Radiology, Biology and Biophysics, University of Rochester, Rochester, N.Y. [Mimeographed.]
- 285 Norseth, T., and T. W. Clarkson. 1970. Biotransformation of methylmercury salts in the rat studied by specific determination of inorganic mercury. *Biochem. Pharmacol.*, 19:2775-2783.
- 286 Norseth, T., and T. W. Clarkson. 1971. Studies on the biotransformation of ^{203}Hg labelled methylmercury chloride in rats. *Arch. Environ. Health*, 21:717-727.
- 287 Nriagu, J. O., and G. M. Anderson. 1970. Calculated solubilities of some base-metal sulphides in brine solutions. *Inst. Min. Metallurgy*. 10 Nov. 1970: B208-B212.
- 288 Nuorteva, P., and E. Hasanen. 1972. Transfer of mercury from fishes to sacrosaprophagous flies. *Ann. Zool. Fenn.*, 9:23-27.
- 289 Nuzzi, R. 1972. Toxicity of mercury to phytoplankton. *Nature*, 237(5349):38-40.
- 290 Ohmono, Y., V. Miettinen, E. Blankenstein, M. Tillander, K. Rissanen, and J. K. Miettinen. 1969. Studies on the distribution of ^{203}Hg -labelled methyl mercury and phenyl mercury in pike. Fifth Radioactivity in Scandinavia Symposium, Department of Radiochemistry, University of Helsinki. [Mimeographed.]

- 291 Okinaka, S., M. Yoshikawa, T. Mozai, Y. Mizuno, T. Terao, H. Watanabe, K. Ogihara, S. Hirai, Y. Yoshino, T. Inose, S. Anzai, and M. Tsuda. 1964. Encephalomyelopathy due to an organic mercury compound. *Neurology*, 14:69-76.
- 292 Oliver, B. G., and J. Kinraide. 1972. Heavy metal concentrations in Ottawa River and Rideau River sediments. Inland Waters Branch, Canadian Center Inland Waters. *Sci. Ser.*, (14): pp. 1-10.
- 293 Oliver, W. T., and N. Platonow. 1960. Studies on the pharmacology of N-(ethylmercuri)-p-toluenesulphon-anilide. *Am. J. Vet. Res.*, 21:906-916.
- 294 Omang, S. H. 1971. Determination of mercury in natural waters and effluents by flameless atomic absorption spectroscopy. *Anal. Chim. Acta*, 53:415-442.
- 295 Ostlund, K. 1969. Studies on the metabolism of methyl mercury and dimethyl mercury in mice. *Acta Pharmacol.*, 27, Suppl. 1:1-132.
- 296 Pappas, E. G., and L. A. Rosenberg. 1966. Determination of submicrogram quantities of mercury by cold vapour atomic absorption photometry. *J. Assoc. Offic. Agric. Chem.*, 49:782-792.
- 297 Parker, C. E. 1970. Mercury--major new environmental problem. *Conservationist*, 25(1):6-9.
- 298 Passow, H., A. Rothstein, and T. W. Clarkson. 1961. The general pharmacology of the heavy metals. *Pharmacol. Rev.*, 13:185-224.
- 299 Peakall, D. B., and R. J. Lovett. 1972. Mercury: its occurrence and effects in the ecosystem. *Bioscience* 22(1):20-25.
- 300 Pehrson, S. O., and N. J. Lindberg. 1948. Control of microorganisms in pulp and paper mills. II. The sorption of phenylmercuric ions on fibres. *Sven. Papperstidn.*, 51:439-446.
- 301 Peirson, D. H., P. A. Cawse, L. Salmon, and R. S. Cambray. 1973. Trace elements in the atmospheric environment. *Nature*, 241(5387):252-256.

- 302 Peterson, G. R., H. V. Warren, R. E. Delavault, and K. Fletcher. 1970. Heavy metal content of some fresh water fishes in British Columbia. B.C. Fish Wildlife Branch, Fish. Tech. Circ. No. 2, pp. 1-29.
- 303 Pillay, K. K. S., C. C. Thomas, J. A. Sondel, and C. M. Hyche. 1972. Mercury pollution of Lake Erie ecosphere. Environ. Res., 5(2):172-181.
- 304 Platonow, N. A. 1968. A study of the metabolic fate of methylmercuric acetate. Occup. Health Rev., 20: 9-19.
- 305 Popkin, R. J. 1971. Calomel. J. Am. Med. Assoc., 216 (8):1347.
- 306 Powell, H. M., and W. A. Jamieson. 1931. Merthiolate as a germicide. Am. J. Hyg., 13:269-310.
- 307 Prick, J. J. G., A. E. H. Sonnen, and J. L. Slooff. 1967a. Organic mercury poisoning, I. Proc. K. Ned. Akad. Wet., 70:150-169.
- 308 Prick, J. J. G., A. E. H. Sonnen, and J. L. Slooff. 1967b. Organic mercury poisoning, II. Proc. K. Ned. Akad. Wet., 70:170-186.
- 309 Prickett, C. S., E. P. Laug, and F. M. Kunze. 1950. Distribution of mercury in rats following oral and intravenous administration of mercuric acetate and phenylmercuric acetate. Proc. Soc. Exp. Biol. Med., 73:585-588.
- 310 Ramel, C. 1969a. Genetic effects of organic mercury compounds. I. Cytological investigations on *Allium* roots. Hereditas, 61:208-230.
- 311 Ramel, C. 1969b. Methylmercury as a mitosis disturbing agent. J. Jap. Med. Assoc., 61(9):1072-1077.
- 312 Ramel, C., and J. Magnusson. 1969. Genetic effects of organic mercury compounds. II. Chromosome segregation in *Drosophila melanogaster*. Hereditas, 61: 231-254.

- 313 Regier, L. W. 1972. Mercury removal from fish protein concentrate. J. Fish. Res. Bd. Canada, 29(2):1777-1779.
- 314 Regier, L. W. 1973. Addendum: Mercury removal from fish protein concentrate. J. Fish. Res. Bd. Canada, 30(9):1404.
- 315 Reguly, R. 1973a. Mercury in game fish: Ontario takes another look. The Toronto Star, 1 Mar.:9.
- 316 Reguly, R. 1973b. Province tells mercury-poisoned Indians to stop eating fish. The Toronto Star, 8 Mar.:1.
- 317 Rodin, A. E., and C. N. Crowson. 1962a. Mercury nephrotoxicity in the rat. Part I. Factors influencing the localization of tubular lesions. Am. J. Pathol., 41(3):297-313.
- 318 Rodin, A. E., and C. N. Crowson. 1962b. Mercury nephrotoxicity in the rat. Part II. Investigation of the intracellular site of mercury nephrotoxicity by correlated serial time histological and histoenzymatic studies. Am. J. Pathol., 41(4):485-499.
- 319 Rosen, E. 1971. The mercurial lens in dentistry. J. Am. Med. Assoc., 216(8):1347.
- 320 Ross, R. G., and K. K. R. Stewart. 1962. Movement and accumulation of mercury in apple trees and soil. Can. J. Plant Sci., 42:280-285.
- 321 Rowland, F. S. 1973. Mercury levels in swordfish and tuna. Biol. Conserv., 5(1):52-53.
- 322 Rudling, L. 1970. Determination of methylmercury by gas chromatography. Swedish Water and Air Pollution Research Laboratory, Stockholm. August 1970. 4 pp.
- 323 Ruzicka, J., and C. G. Lamm. 1969. Automated determination of traces of mercury in biological material by substiochiometric radioisotope dilution. Talanta, 16:157-168.

- 324 Saito, M., T. Osono, J. Watanabe, T. Yamamoto, M. Takeuchi, Y. Ohyagi, and H. Katsunuma. 1961. Studies on Minamata disease. Establishment of the criterion for etiological research in mice. *Jap. J. Exp. Med.* 31:277-290.
- 325 Samsahl, K., D. Brune, and P. O. Wester. 1965. Simultaneous determination of 30 trace elements in cancerous and non-cancerous human tissue samples by neutron activation analysis. *Int. J. Appl. Radiat.*, 16:273-281.
- 326 Sandell, E. B. 1965. Colorimetric determination of traces of metals. Interscience, New York. p. 621-639.
- 327 Schachter, M. 1966. Apparatus for cold vapour atomic absorption of mercury. *J. Assoc. Offic. Agric. Chem.*, 49:778-782.
- 328 Schmidt, J. W., ed. 1971. Mercury and other trace elements in the environment. A compilation of federal government research projects and surveys. Can. Center Inland Waters Bull., Environmental Protection Service, Ottawa. pp. 1-50.
- 329 Scott, A. 1959. The behavior of radioactive mercury and zinc after application to normal and abnormal skin. *Br. J. Dermatol.*, 71:181-189.
- 330 Scott, D. P., and F. A. J. Armstrong. 1972. Mercury concentration in relation to size in several species of freshwater fishes from Manitoba and northwestern Ontario. *J. Fish. Res. Bd. Canada*, 29(12):1685-1690.
- 331 Seagran, H. L. 1970. Mercury in Great Lakes fish. *Limnos*, 3(2):3-10.
- 332 Shacklette, H. T., J. G. Boerngen, and R. L. Turner. 1971. Mercury in the environment--surficial materials of the conterminous United States. *U.S. Geol. Surv. Circ.* 664, pp. 1-3.
- 333 Shore, V., and B. Shore. 1960. Effect of mercuric chloride on some kidney enzymes in chow-fed and sucrose-fed rat. *Am. J. Physiol.*, 187-190.

- 334 Sjostrand, B. 1964. Simultaneous determination of mercury and arsenic in biological and organic materials by activation analysis. *Anal. Chem.*, 36:814-819.
- 335 Skerfving, S., A. Hansson, and J. Lindsten. 1970. Chromosome breakage in human subjects exposed to methyl mercury through fish consumption. *Arch. Environ. Health*, 21:133-139.
- 336 Skog, E., and J. E. Wahlberg. 1964. A comparative investigation of the percutaneous absorption of metal compounds in the guinea pig by means of the radioactive isotopes: ^{51}Cr , ^{58}Co , ^{65}Zn , $^{110\text{m}}\text{Ag}$, $^{115\text{m}}\text{Cd}$, ^{203}Hg . *J. Invest. Dermatol.*, 43:187-192.
- 337 Smart, N. A. 1964. Mercury residues in potatoes following application of a foliar spray containing phenylmercury chloride. *J. Sci. Food Agric.*, 15: 102-108.
- 338 Smart, N. A. 1968. Uses and residues of mercury compounds in agriculture. *Residue Rev.*, 23:1-36.
- 339 Smart, N. A., and A. R. C. Hill. 1969. Determination of mercury residues in potatoes, grain and animal tissues using perchloric acid digestion. *Analyst*, 94:143-147.
- 340 Smart, N. A., and M. K. Lloyd. 1963. Mercury residues in eggs, flesh, and livers of hens fed on wheat treated with methylmercuric dicyandiamide. *J. Sci. Food Agric.*, 14:734-740.
- 341 Smith, G. D., and H. K. Schachman. 1971. A disproportionation mechanism for the all-or-none dissociation of mercurial treated glyceraldehyde phosphate dehydrogenase. *Biochemistry*, 10(24):4576-4588.
- 342 Stainton, M. P. 1971. Syringe procedure for transfer of nanogram quantities of mercury vapour for flameless atomic absorption spectrophotometry. *Anal. Chem.*, 43(4):625-627.
- 343 Stainer, L. A., and P. M. Blumberg. 1971. Mercury derivatives of the Fab and Fc fragments of human myeloma protein. *Biochemistry*, 10(25):4725-4739.

- 344 Steinwall, O., and Y. Olsson. 1969. Impairment of the blood-brain barrier in mercury poisoning. *Acta Neurol. Scand.*, 45:351-361.
- 345 Storrs, B., J. Thompson, G. Fair, M. S. Dickerson, L. Nickey, W. Barthel, and J. E. Spaulding. 1970. Organic mercury poisoning. *Morbidity and Mortality*, 19:25-26.
- 346 Storrs, B., J. Thompson, L. Nickey, W. Barthel, and J. E. Spaulding. 1970. Follow-up organic mercury poisoning. *Morbidity and Mortality*, 19:169-170.
- 347 Sumino, K. 1968a. Analysis of organic mercury compounds by gas chromatography. Part I. Analytical and extraction method of organic mercury compounds. *Kobe J. Med. Sci.*, 14:115-130.
- 348 Sumino, K. 1968b. Analysis of organic mercury compounds by gas chromatography. Part II. Determination of organic mercury compounds in various samples. *Kobe J. Med. Sci.*, 14:131-148.
- 349 Sutterlin, A. M., and N. Sutterlin. 1970. Taster responses in Atlantic salmon (*Salmo salar*) parr. *J. Fish. Res. Bd. Canada*, 27(11):1927-1942.
- 350 Suzuki, T. 1969. Neurological symptoms from concentration of mercury in the brain. In Miller, M. W., and G. G. Berg, eds. *Chemical fallout. Current research on persistent pesticides*. C. C. Thomas, Springfield, Illinois. pp. 245-257.
- 351 Suzuki, T., N. Matsumoto, T. Miyama, and H. Katsunuma. 1967. Placental transfer of mercuric chloride, phenyl mercury acetate and methyl mercury acetate in mice. *Ind. Health*, 5:149-155.
- 352 Suzuki, T., T. Miyama, and H. Katsunuma. 1963. Comparative study of bodily distribution of mercury in mice after subcutaneous administration of methyl ethyl, and n-propyl mercury acetates. *Jap. J. Exp. Med.*, 33:277-282.

- 353 Suzuki, T., T. Miyama, and H. Katsunuma. 1964. Comparative study of bodily distribution of mercury in mice after subcutaneous administration of propyl, butyl, and amyl mercury acetates. *Jap. J. Exp. Med.*, 34: 211-216.
- 354 Suzuki, T., T. Miyama, and H. Katsunuma. 1971. Comparison of mercury contents in maternal blood, umbilical cord, and placental tissues. *Bull. Environ. Contam. Toxicol.*, 5:502-508.
- 355 Suzuki, T., and K. Yoshino. 1969. Effects of d-penicillamine on urinary excretion of mercury in two cases of methyl mercury poisoning. *Ind. Med.*, 11:21-22.
- 356 Swanson, G. A., G. L. Krapu, and H. K. Nelson. 1972. Mercury levels in tissues of ducks collected in south-central North Dakota. *Chem. Abstr.*, 77(11): 71038u:119. [Abstracted from *Proc. N. Dakota Akad. Sci.*, 1972, 25, pt. 2, 84-93.]
- 357 Swensson, A. 1952. Investigations on the toxicity of some organic mercury compounds which are used as seed disinfectants. *Acta Med. Scand.*, 143:365-384.
- 358 Swensson, A., K.-D. Lundgren, and O. Lindstrom. 1959a. Distribution and excretion of mercury compounds after single injection. *Arch. Industr. Health*, 20:432-443.
- 359 Swensson, A., K.-D. Lundgren, and O. Lindstrom. 1959b. Retention of various mercury compounds after subacute administration. *Arch. Industr. Health*, 20:467-472.
- 360 Swensson, A., and U. Ulfvarson. 1967a. Toxicology of organic mercury compounds used as fungicides. *Occup. Health Rev.*, 15:5-11.
- 361 Swensson, A., and U. Ulfvarson. 1967b. Experiments with different antidotes in acute poisoning by different mercury compounds, effects on survival and on distribution and excretion of mercury. *Int. Arch. Gewerbepathol. Gewerbehyg.*, 24:12-50.

- 362 Swensson, A., and U. Ulfvarson. 1968a. Distribution and excretion of various mercury compounds after single injections in poultry. *Acta Pharmacol.*, 26: 259-272.
- 363 Swensson, A., and U. Ulfvarson. 1968b. Distribution and excretion of mercury compounds in rats over a long period after a single injection. *Acta Pharmacol.*, 26:273-283.
- 364 Takahashi, H., and K. Hirayama. 1971. Accelerated elimination of methylmercury from animals. *Nature*, 232(5307):201-202.
- 365 Takahashi, H., H. Hirayama, and T. Kuroda. 1971. Use of pyridoxine-5-thiol in methyl mercury poisoning. *Toxicol. Appl. Pharmacol.*, 18(4):988-990.
- 366 Takeda, Y., T. Kunugi, O. Hoshino, and T. Ukita. 1968. Distribution of inorganic, aryl and alkyl mercury compounds in rats. *Toxicol. Appl. Pharmacol.*, 13: 156-164.
- 367 Takeda, Y., T. Kunugi, T. Terao, and T. Ukita. 1968. Mercury compounds in the blood of rats treated with ethylmercuric chloride. *Toxicol. Appl. Pharmacol.*, 13:165-173.
- 368 Takeuchi, T. 1961. A pathological study of Minamata disease in Japan. *In* Proc. VII Int. Congr. Neurol. Rome, pp. 1-24.
- 369 Takeuchi, T. 1968a. Pathology of Minamata disease. *In* Kutsuna, M., ed. Minamata disease. Study group of Minamata disease, Kumamoto University, Japan. pp. 141-228.
- 370 Takeuchi, T. 1968b. Experiments with organic mercury, particularly with methyl mercury compounds, similarities between experimental poisoning and Minamata disease. *In* Kutsuna, M., ed. Minamata disease. Study group of Minamata disease, Kumamoto University, Japan. pp. 229-252.

- 371 Takeuchi, T. 1970. Biological reactions and pathological changes of human beings and animals under the condition of organic mercury contamination. Int. Conf. Environ. Mercury Contam., Ann Arbor, Michigan. 30 pp.
- 372 Takeuchi, T., T. Kambara, N. Morikawa, H. Matsumoto, Y. Shiraishi, and H. Ito. 1959. Pathological observations of the Minamata disease. Acta Pathol. Jap., 9:769-783.
- 373 Takeuchi, T., N. Morikawa, H. Matsumoto, and Y. Shiraishi. 1962. A pathological study of Minamata disease in Japan. Acta Neuropathol., 2:40-57.
- 374 Takizawa, Y. 1970. Studies on the Nugata episode of Minamata disease outbreak--investigation of causative agents of organic mercury poisoning in the district along the River Agano. Acta Med. Biol., 17(4):293-297.
- 375 Tammisto, E. S., K. Koljonen, and I. Santaoja. 1968. The effects of seed disinfectants containing alkoxyalkyl mercury derivatives on the mercury content of hen's eggs in feed test with disinfected cereals. Ann. Agric. Fenn., 7 Suppl. 1:15-21.
- 376 Tatton, J. O. G., and P. J. Wagstaffe. 1969. Identification and determination of organomercurial fungicide residues by thin-layer and gas chromatography. J. Chromatogr., 44:284-289.
- 377 Taylor, N. S. 1965. Histochemical studies of nephrotoxicity with sublethal doses of mercury in rats. Am. J. Pathol., 46:1-21.
- 378 Taylor, W., H. A. Guirgis, and W. K. Stewart. 1969. Investigation of a population exposed to organomercurial seed dressings. Arch. Environ. Health, 19:505-509.
- 379 Tejning, S. 1967a. Biological effects of methyl mercury dicyandiamide treated grain in the domestic fowl, *Gallus gallus* L. Oikos, (Suppl. 8):1-116.

- 380 Tejning, S. 1967b. Mercury in pheasants (*Phasianus colchicus* L.) deriving from seed grain dressed with methyl and ethyl mercury compounds. *Oikos*, 18: 334-344.
- 381 Tejning, S. 1967c. [Mercury content of blood corpuscles, blood plasma and in heavy fish eaters from different areas of Lake Vänern and the relation between the mercury content of these tissues and the mercury content of fish and a suggestion regarding the international food and health limit value and its use for fish and fish products.] Report 670831, Clinic Occup. Med., University Hospital, Lund, Sweden. 30 pp. [In Swedish.] Fish. Res. Bd. Canada Tech. Trans. Ser. 1362, 38 pp.
- 382 Tejning, S. 1970. No fish for mother. *Scand. Times*, 4:24-25.
- 383 Tejning, S., and H. Ohman. 1966. Uptake, excretion and retention of metallic mercury in chloralkali workers. *In* Proc. 15th Int. Congr. Occup. Health, Vienna. pp. 239-242.
- 384 Tejning, S., and R. Vesterberg. 1964. Mercury in tissues and eggs from hens fed with grain containing mercury dicyandiamide. *Poult. Sci.*, 43:6-11.
- 385 Thomas, R. L. 1972a. The distribution of mercury in the sediments of Lake Ontario. *Can. J. Earth Sci.*, 9(6):636-651.
- 386 Thomas, R. L. 1972b. The distribution of mercury in the surficial sediments of Lake Huron. *Can. J. Earth Sci.*, 10(2):194-204.
- 387 Tillander, M. 1969. Studies on excretion rates of organic mercury compounds in seal and fish. Fifth Radioactivity in Scandinavia Symposium, Department of Radiochemistry, University of Helsinki. [Mimeographed.]

- 388 Tillander, M., J. K. Miettinen, K. Rissanen, V. Miettinen, and E. Minkkinen. 1969. Discussion contribution: Excretion of phenyl and methyl mercury nitrate after oral administration of intramuscular injection in fish, mussel, mollusc and crayfish. *Nord. Hyg. Tidskr.*, 50:181-183.
- 389 Tokunaga, A. 1966. Medical rehabilitation for motor disturbance in Minamata disease. *Kumamoto Med. J.*, 19:220-236.
- 390 Tokuomi, H. 1968. Clinical investigations on Minamata disease. Minamata disease in human adult. *In* Kutsuna, M., ed. Minamata disease. Study group of Minamata disease, Kumamoto University, Japan. pp. 37-72.
- 391 Tokuomi, H., T. Okajima, J. Kanai, M. Tsunoda, Y. Ichiyasu, H. Misumi, K. Shimomura, and M. Takaba. 1961a. Minamata disease--an unusual neurological disorder occurring in Minamata, Japan. *Kumamoto Med. J.*, 14:47-64.
- 392 Tokuomi, H., T. Okajima, J. Kanai, M. Tsunoda, Y. Ichiyasu, H. Misumi, K. Shimomura, and M. Takaba. 1961b. Minamata disease. *World Neurol.*, 2:536-544.
- 393 Tonomura, K., and F. Kanzaki. 1969. The reductive decomposition of organic mercurials by cell-free extract of a mercury resistant pseudomonas. *Acta Biochim. Biophys.*, 184:227-229.
- 394 Tonomura, K., K. Maeda, F. Futai, T. Nakagami, and M. Yamada. 1968. Stimulative vaporization of phenylmercuric acetate by mercury-resistant bacteria. *Nature*, 217(5129):644-646.
- 395 Tonomura, K., K. Furukawa, and M. Yamada. 1972. Microbial conversion of mercury compounds. *In* Matsumura, F., G. M. Boush, and T. Misato, eds. Environmental toxicology of pesticides. Academic Press, New York. pp. 115-133.

- 396 Trachtenberg, I. M., G. A. Goncharuk, and V. E. Balashov. 1966. Nature of the cardiotoxic effect of mercury and organic mercury compounds. Chem. Abstr. 65(15969). [Abstracted from Vestn. Akad. Med. Nauk SSSR. 1966. 21(8):23-30.]
- 397 Trichel, J. A. 1972. Sounding out metal toxicity. Sci. News, 102(14):223.
- 398 Tryphonas, L., and N. O. Nielsen. 1970. The pathology of arylmercurial poisoning in swine. Can. J. Comp. Med., 34:181-190.
- 399 Tsuda, M., S. Anzai, and M. Sakai. 1963. Organic mercury poisoning--a case report. Yokohama Med. Bull., 14:287-296.
- 400 Turney, W. G. 1971. Mercury pollution: Michigan's action program. J. Wat. Pollut. Control Fed., 43(3, pt. 1):447-453.
- 401 Uchida, M., and K. Hirakama. 1961. Biochemical studies on Minamata disease. III. Relationships between the causal agent of the disease and the mercury compound in the shellfish with reference to their chemical behaviors. Kumamoto Med. J., 14:171-179.
- 402 Uchida, M., K. Hirakama, and T. Indue. 1961. Biochemical studies on Minamata disease. IV. Isolation and chemical identification of the mercury compound in the toxic shellfish with special reference to the causal agent of the disease. Kumamoto Med. J., 14:181-187.
- 403 Ueda, K., H. Aoki, and M. Nishimura. 1970. Alkyl mercury levels in non-contaminated fish and general populations in Japan. Proc. 16th Int. Congr. Occup. Health, Tokyo. Sept. 1969. Japanese Industrial Safety Association, Tokyo.
- 404 Ui, J. 1966. Discussion contribution to Irukayama, K.: The pollution of Minamata Bay and Minamata disease. Adv. Water Pollut. Res., 3:167-174.
- 405 Ui, J. 1969. A short history of Minamata disease research and the present situation of mercury pollution in Japan. Nord. Hyg. Tidskr., 50:139-146.

- 406 Ui, J., and S. Kitamura. 1969. Mercury pollution of sea and fresh water. Its accumulation into water biomass. Report to WHO. [Mimeographed.]
- 407 Ui, J., and S. Kitamura. 1971. Mercury in the Adriatic. Mar. Pollut. Bull., 2(4):56-58.
- 408 Ukita, T. 1972. Research on the distribution and accumulation of organomercurials in animal bodies. In Matsumura, F., G. M. Boush, and T. Misato, eds. Environmental toxicology of pesticides. Academic Press, New York. pp. 135-164.
- 409 Ulfvarson, U. 1962. Distribution and excretion of some mercury compounds after long term exposure. Int. Arch. Gewerbepathol. Gewerbehyg., 19:412-422.
- 410 Ulfvarson, U. 1967. Determination of mercury in small quantities in biological material by a modified photometric-mercury vapour procedure. Acta Chem. Scand., 21:641-646.
- 411 Ulfvarson, U. 1969a. The effect of the size of the dose on the distribution and excretion of mercury in rats after a single intravenous injection of various mercury compounds. Toxicol. Appl. Pharmacol., 15: 1-8.
- 412 Ulfvarson, U. 1969b. The absorption and distribution of mercury in rats, fed with organs from other rats injected with various mercury compounds. Toxicol. Appl. Pharmacol., 15:525-531.
- 413 Ulfvarson, U. 1970. Transportation of mercury in animals. Studea Laboris et Salutis, 6:1-63.
- 414 Umeda, M., K. Saito, K. Hirose, and M. Saito. 1969. Cytotoxic effects of inorganic phenyl and alkyl mercuric compounds on Hela cells. J. Exp. Med., 39:47-58.
- 415 Uthe, J. F., F. A. J. Armstrong, and M. P. Stainton. 1970. Mercury determination in fish samples by wet digestion and flameless atomic absorption spectrophotometry. J. Fish. Res. Bd. Canada, 27(4):805-811.

- 416 Uthe, J. F., and E. G. Bligh. 1971. Preliminary survey of heavy metal contamination of Canadian freshwater fish. J. Fish. Res. Bd. Canada, 28(5):786-788.
- 417 Valpy, M. 1973. Indians healthy but--may be lucky to be alive. Mercury pollution. The Globe and Mail, Toronto, 1 Feb.:7.
- 418 Verity, M. A., and W. J. Brown. 1970. Hg²⁺ induced kidney necrosis: subcellular localization and structure-linked lysosomal enzyme changes. Am. J. Pathol., 61(1):57-74.
- 419 Verity, M. A., and A. Reith. 1968. Effect of mercurial compounds on structure-linked latency of lysosomal hydrolases. Biochem. J., 109:149-154.
- 420 Vermeer, K. 1972. The crayfish *Orconectes virilis* as an indicator of mercury contamination. Can. Field Nat., 86(2):123-125.
- 421 Vernberg, W. B., and J. O'Hara. 1972. Temperature-salinity stress and mercury uptake in the fiddler crab *Uca pugilator*. J. Fish. Res. Bd. Canada, 29(10):1491-1494.
- 422 Vinogradov, A. P. 1953. The elementary chemical composition of marine organisms. Sears Foundation, New Haven, Conn. 325 pp.
- 423 Vintinner, F. J. 1940. *Dermatitis venenata* resulting from contact with an aqueous solution of ethyl mercury phosphate. J. Ind. Hyg. Toxicol., 22: 297-300.
- 424 Vostal, J., and J. Heller. 1968. Renal excretory mechanisms of heavy metals. I. Transtubular transport of heavy metal ions in the avian kidney. Environ. Res., 2(1):1-10.
- 425 Wagner, H. N., I. M. Weiner, J. G. McAfee, and J. Martinez. 1964. I-mercuri-2-hydroxypropane (MHP). Arch. Intern. Med., 113:696-701.
- 426 Wahlberg, J. E. 1965a. A method for studying percutaneous toxicity of metal compounds in the guinea pig. Acta Derm.-Venereol., 45:171-177.

- 427 Wahlberg, J. E. 1965b. "Disappearance measurements", a method for studying percutaneous absorption of isotope-labelled compounds emitting gamma-rays. *Acta Derm.-Venereol.*, 45:397-414.
- 428 Wahlberg, P., E. Karppanen, K. Henriksson, and D. Nyman. 1971. Human exposure to mercury from goosander eggs containing methyl mercury. *Acta Med. Scand.*, 189:235-239.
- 429 Wanntorp, H., K. Borg, E. Hanko, and K. Erne. 1967. Mercury residues in wood pigeons (*Columba p. palumbus* L.) in 1964 and 1966. *Nord. Vet. Med.*, 19:474-477.
- 430 Warren, H. V., R. E. Delavault, and J. Barakso. 1966. Some observations on the geochemistry of mercury as applied to prospecting. *Ec. Geol.*, 61(6):1010-1028.
- 431 Warren, H. V., and R. E. Delavault. 1969. Mercury content of some British soils. *Oikos*, 20:537-539.
- 432 Watanabe, S. 1971. Mercury in the body treated for 10 years after long term exposure to mercury. *Proc. 16th Int. Congr. Occup. Health*, Tokyo, Sept. 1969. Japanese Industrial Safety Association, Tokyo.
- 433 Watkin, J. E., ed. 1971. Proceedings special symposium on mercury in man's environment. 15 and 16 February 1971. The Royal Society of Canada, Ottawa. 201 pp.
- 434 Weed, L. A., and E. E. Ecker. 1933. Phenyl-mercuric compounds, their action on animals and their preservative values. *J. Infect. Dis.*, 52:354-363.
- 435 Wei, E., and R. C. Spear. 1971. The fatal dose of methylmercury in man. *J. Am. Med. Assoc.*, 216(8): 1347.
- 436 Weiner, I. M., R. I. Levy, and G. H. Mudge. 1962. Studies on mercurial diuresis: renal excretion acid stability and structure activity relationships of organic mercurials. *J. Pharmacol. Exp. Ther.*, 138: 96-112.

- 437 Weisbart, M. 1973. The distribution and tissue retention of mercury-203 in the goldfish (*Carassius auratus*). Can. J. Zool., 51:143-150.
- 438 Weiss, H. V., M. Koide, and E. D. Goldberg. 1971. Mercury in Greenland ice sheet: evidence of recent input by man. Science, 174(4010):692-694.
- 439 Wenninger, J. A. 1965. Direct microdetermination of mercury in colour additives by the photometric mercury vapour procedure. J. Assoc. Offic. Agric. Chem., 48:826-832.
- 440 Wester, P. O. 1965. Concentration of 24 trace elements in human heart tissue determined by neutron activation analysis. Scand. J. Clin. Lab. Invest., 17: 357-370.
- 441 Westermarck, T., and B. Sjostrand. 1960. Activation analysis of mercury. Int. J. Appl. Radiat. Isot., 9:1-15.
- 442 Westoo, G. 1966. Determination of methylmercury compounds in foodstuffs. Part I. Methylmercury in fish, identification and determination. Acta Chem. Scand., 20:2131-2137.
- 443 Westoo, G. 1967a. Determination of methylmercury compounds in foodstuffs. Part 2. Determination of methylmercury in fish, eggs, meat, and liver. Acta Chem. Scand., 21:1790-1800.
- 444 Westoo, G. 1967b. Methylmercury compounds in fish. Oikos, Suppl. 9:11-12.
- 445 Westoo, G. 1968. Determination of methylmercury salts in various kinds of biological material. Acta Chem. Scand., 22:2277-2280.
- 446 Westoo, G. 1969. Mercury and methyl mercury levels in some animal foods, August 1967-October 1969. Var Foda, 7:137-154.
- 447 Wien, R. 1939. The toxicity of parachlorometacresol and of phenylmercuric nitrate. Q. J. Pharm., 12:212-229.

- 448 Williams, L., A. J. Majer, J. L. Custer, and F. C. Miller. 1968. A survey of mercury vapour hazards in hospitals. *Am. Ind. Hyg. Assoc. J.*, 29:186-188.
- 449 Williston, S. H. 1968. Mercury in the atmosphere. *J. Geophys. Res.*, 73:7051-7055.
- 450 Windom, H., R. Stickney, R. Smith, D. White, and F. Taylor. 1973. Arsenic, cadmium, copper, mercury and zinc in some species of North Atlantic finfish. *J. Fish. Res. Bd. Canada*, 30(2):275-279.
- 451 Wishart, W. 1970. A mercury problem in Alberta's game birds. *Alberta Lands Forests Parks Wildlife*, 13(2):4-9.
- 452 Wobeser, G., N. O. Nielsen, R. H. Dunlop, and F. M. Atton. 1970. Mercury concentrations in tissues of fish from the Saskatchewan River. *J. Fish. Res. Bd. Canada*, 27(4):830-834.
- 453 Wood, J. M., F. S. Kennedy, and C. G. Rosen. 1968. Synthesis of methyl-mercury compounds by extracts of a methanogenic bacterium. *Nature*, 220(5163): 173-174.
- 454 Wood, J. R. 1972. Investigation of the variability of mercury concentrations within the organs of the white bass of Lake Erie. M.Sc. Thesis. Ohio State University. 86 pp.
- 455 Yamaguchi, S., and H. Matsumoto. 1966. Diagnostic significance of the amount of mercury in hair. *Proc. 15th Int. Congr. Occup. Health, Vienna*. pp. 255-259.
- 456 Yoshino, Y., T. Mosai, and K. Nakao. 1966a. Distribution of mercury in the brain and in its subcellular units in experimental organic mercury poisonings. *J. Neurochem.*, 13:397-406.
- 457 Yoshino, Y., T. Mosai, and K. Nakao. 1966b. Biochemical changes in the brain in rats poisoned with an alkyl-mercury compound, with special reference to the inhibition of protein synthesis in brain cortex slices. *J. Neurochem.*, 13:1223-1230.

- 458 Zitko, V. 1971a. Heavy metals in the precipitation in the vicinity of St. Andrews, New Brunswick. Fish. Res. Bd. Canada, MS Rep. 1129. pp. 1-9.
- 459 Zitko, V. 1971b. Removal of protein-bound methylmercury. Fish. Res. Bd. Canada, MS Rep. 1131. pp. 1-11.
- 460 Zitko, V., B. J. Finlayson, D. J. Wildish, J. M. Anderson, and A. C. Kohler. 1971. Methylmercury in freshwater and marine fishes in New Brunswick, in the Bay of Fundy, and on the Nova Scotia Banks. J. Fish. Res. Bd. Canada, 28(9):1285-1291.

Acknowledgments

The authors would like to thank Eve Dowie, Assistant Librarian for Life Sciences, and Pat Trunks, Library Assistant of the Royal Ontario Museum Library, for their help in compiling the references listed in the bibliography. Appreciation is also expressed to Lois Casselman for typing the manuscript.



